

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Examiner: Jeanette E. Chapman

Group Art Unit: 3633

In re application of:

PAOLO TIRAMANI

Serial No.: 10/653,523

Filed: September 2, 2003

MODULAR PREFABRICATED  
HOUSE

Attorney Docket No. 286357-00004-1

**APPELLANT'S BRIEF ON APPEAL**

April 18, 2008

Commissioner for Patents  
MAIL STOP APPEAL BRIEF - PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal from the decision of the Examiner, dated November 28, 2007, rejecting Claims 1, 2, 4-11 and 13-19 of the above-identified application. The claims are set forth in Appendix 1, which is attached hereto.

**Real Party In Interest**

The real party in interest is Paolo Tiramani.

**Related Appeals and Interferences**

There are no other appeals or interferences known to Appellant or to Appellant's legal representative which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

### **Status of the Claims**

Claims 1, 2, 4-11 and 13-19 are pending in the application. Claims 3 and 12 have been cancelled.

The following claims are addressed in this Appeal:

Claims 1-2, 4, and 17-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Dattner* (U.S. Patent No. 3,720,022) (“*Dattner* ‘022”).

Claims 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Derman* (U.S. Patent No. 2,070,924) (“*Derman* ‘924”).

Claims 7-11, 13, 16, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Prigmore et al.* (U.S. Patent No. 4,779,514) (“*Prigmore et al.* ‘514”).

Claims 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Prigmore et al.* ‘514 as applied to claim 13 and further in view of *Derman* ‘924.

### **Status of the Amendments**

There are currently no amendments to the pending claims. The claims, as they stand on Appeal, are contained in Appendix 1 to this Brief.

### **Summary of the Claimed Subject Matter**

The invention provides a prefabricated house (3) (Page 7, line 5) having two or more modules (10) (Page 7, line 3), each module having a frame (22) (Page 9, line 3), said frame (22) (Page 9, line 3) having a plurality of studs (21, 21A) (Page 9, line 14). The module frames (22) (Page 9, line 3) having one or more multiframe openings (20) (Page 9, line 2) that may be converted to doors, windows, or other openings. Thus, the individual modules (10) (Page 7, line 3) are structured to be joined at the multi-frame openings (20) (Page 9, line 2) in more than one configuration. For example, if each module (10) (Page 7, line 3) was rectangular and included a multi-frame opening (20) (Page 9, line 2) at the middle point of each wall, the modules could be joined along adjacent longitudinal walls, thereby forming, generally, a square-shaped layout, or the modules (10) (Page 7, line 3) could be joined

with a longitudinal wall coupled to a lateral wall, thereby forming, generally, a T-shaped layout.

The multi-frame openings (20) (Page 9, line 2) are disposed at set distances regardless of the shape of the module (10) (Page 7, line 3). Thus, modules (10) (Page 7, line 3) of different shapes may be joined as the multi-frame openings (20) (Page 9, line 2) will be spaced properly. Additionally, there may be more than one opening between modules (10) (Page 7, line 3). For example, two rectangular modules (10) (Page 7, line 3), each having a plurality of multi-frame openings (20) (Page 9, line 2) along the longitudinal wall, may be joined by doors at each end of the joined longitudinal wall.

The multi-frame openings (20) (Page 9, line 2) are created as part of the frame during the construction of the module. The multi-frame openings (20) (Page 9, line 2) may then be covered, for example, by dry wall. During construction of the house, the covering is removed at each multi-frame opening (20) (Page 9, line 2) where modules (10) (Page 7, line 3) need to be joined. Alternatively, if the layout of the house is known, the multi-frame openings (20) (Page 9, line 2) may be converted to the proper type of aperture, that is, doors, windows, and such, during construction of the module (10) (Page 7, line 3). However, if, during construction of the house, the customer desires a new window or door, a multi-frame opening (20) (Page 9, line 2) may also be converted to an aperture at the construction site. Because each type of module (10) (Page 7, line 3) is manufactured in an identical manner, regardless of where the apertures will be disposed, manufacturing costs are reduced. However, because each type of module (10) (Page 7, line 3) includes a plurality of multi-frame openings (20) (Page 9, line 2), each module (10) (Page 7, line 3) is still adaptable to the layout chosen by the customer.

Each multi-frame opening (20) (Page 9, line 2) is constructed from two studs (21, 21A) (Page 9, line 14), which are part of a frame (22) (Page 9, line 3) having a plurality of studs (21, 21A) (Page 9, line 14), and have a plurality of medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16). Depending upon the purpose of the opening, different medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) may be removed. For example, for a door, all but the uppermost medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) would be removed,

whereas for a window, only those medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) between waist high and uppermost medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) would be typically removed.

The claims addressed in this appeal include the following:

1. (Previously Presented) A prefabricated house (3) (Page 7, line 5) comprising:

two or more modules (10) (Page 7, line 3), each module having a frame (22) (Page 9, line 3), said frame (22) (Page 9, line 3) having a plurality of studs (21, 21A) (Page 9, line 14);

said module frames (22) (Page 9, line 3) having one or more multiframe openings (20) (Page 9, line 2);

each said multiframe opening (20) (Page 9, line 2) incorporating two studs (21, 21A) (Page 9, line 14) from said frame (22) (Page 9, line 3) plurality of studs (21, 21A) (Page 9, line 14) and having a plurality of medial cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16); and

said two or more modules (10) (Page 7, line 3) structured to be joined at one of said one or more multi-frame openings (20) (Page 9, line 2).

2. (Original) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein:

said multi-frame openings (20) (Page 9, line 2) are enclosed within a covering over said frame (22) (Page 9, line 3); and

said multi-frame openings (20) (Page 9, line 2) are structured to be converted into openings.

4. (Previously Presented) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is coupled to said studs (21, 21A) (Page 9, line 14) in a manner sufficient to support any additional components selected from the group including: doors, windows, fireplaces or dormers.

5. (Original) The prefabricated house (3) (Page 7, line 5) of claim 4 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is removably coupled to said studs (21, 21A) (page 9, line 14) .

6. (Original) The prefabricated house (3) (Page 7, line 5) of claim 3 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is removably coupled to said studs (21, 21A) (page 9, line 14) .

7. (Original) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein said modules (10) (Page 7, line 3) include one or more foldable panels (18) (Page 8, line 29).

8. (Original) The prefabricated house (3) (Page 7, line 5) of claim 7 wherein:

at least one of said two or more modules (10) (Page 7, line 3) is a core module (11) (Page 7, line 26) having a fixed space portion (12) (page 7, lines 26-27) and a passive space portion (14) (Page 7, line 27);

said fixed space portion (12) (page 7, lines 26-27) having non-foldable walls;

said passive space portion (14) (page 7, line 27) having said foldable panels (18) (Page 8, line 29);

said foldable panels (18) (Page 8, line 29) movable from a first, closed position to second open position; and

wherein said core module (11) (Page 7, line 26) has dimensions of less than about 66 feet, by 10 feet, by 12 feet when said foldable panels (18) (Page 8, line 29) are in said first position.

9. (Original) The prefabricated house (3) (Page 7, line 5) of claim 8 wherein said multi-frame openings (20) (Page 9, line 2) are structured to be converted into an opening selected from the group including: doors, windows, fireplaces or dormers.

10. (Original) The prefabricated house (3) (Page 7, line 5) of claim 8 wherein said modules (10) (Page 7, line 3) may be joined at said multi-frame openings (20) (Page 9, line 2) with said modules (10) (Page 7, line 3) disposed in more than one configuration relative to each other.

11. (Original) The prefabricated house (3) (Page 7, line 5) of claim 10 wherein:  
said multi-frame openings (20) (Page 9, line 2) are enclosed within a covering over said frame (22) (Page 9, line 3); and  
said multi-frame openings (20) (Page 9, line 2) are structured to be converted into openings.

13. (Original) The prefabricated house (3) (Page 7, line 5) of claim 12 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is coupled to said studs (21, 21A) (Page 9, line 14) in a manner sufficient to support any additional components selected from the group including: doors, windows, fireplaces or dormers.

14. (Original) The prefabricated house (3) (Page 7, line 5) of claim 13 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is removably coupled to said studs (21, 21A) (Page 9, line 14) .

15. (Original) The prefabricated house (3) (Page 7, line 5) of claim 12 wherein each cross-member in said plurality of cross-members (23, 24, 25, 26, 27, 28, 29) (Page 9, line 16) is removably coupled to said studs (21, 21A) (Page 9, line 14) .

16. (Original) The prefabricated house (3) (Page 7, line 5) of claim 10 wherein each said module (10) (Page 7, line 3) includes substantially finished trim.

17. (Original) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein said modules (10) (Page 7, line 3) may be joined at said multi-frame

openings (20) (Page 9, line 2) with said modules (10) (Page 7, line 3) disposed in more than one configuration relative to each other.

18. (Original) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein each said module (10) (Page 7, line 3) includes substantially finished trim.

19. (Original) The prefabricated house (3) (Page 7, line 5) of claim 1 wherein:

at least one of said two or more modules (10) (Page 7, line 3) is a core module (11) (Page 7, line 26) having a fixed space portion (12) (Page 7, lines 26-27) and a passive space portion (14) (Page 7, line 27);

said passive space portion (12) (page 7, lines 26-27) structured to move from a first, closed position to second open position; and

wherein said core module (11) (Page 7, line 26) has dimensions of less than about 66 feet, by 10 feet, by 12 feet when said passive space portion (14) (Page 7, line 27) is in said first position.

#### **Grounds of Rejection to be Reviewed on Appeal**

Claims 1-2, 4, and 17-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Dattner* (U.S. Patent No. 3,720,022) (“*Dattner* ‘022”).

Claims 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Derman* (U.S. Patent No. 2,070,924) (“*Derman* ‘924”).

Claims 7-11, 13, 16, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Prigmore et al.* (U.S. Patent No. 4,779,514) (“*Prigmore et al.* ‘514”).

Claims 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* ‘022 in view of *Prigmore et al.* ‘514 as applied to claim 13 and further in view of *Derman* ‘924.

### Argument

#### Claims 1-2, 4, and 17-18; Rejected under 35 U.S.C. § 102(e)

Claims 1-2, 4, and 17-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Dattner* '022.

Initially, it is noted that this application is directed to the construction of homes, and more specifically, prefabricated homes. Thus, the terminology and the meaning of the words used in the claims must encompass the meaning that a builder of homes would apply to those words. For example, Robert Delorenzo, a party with no interest in this application and whose Affidavit has been previously submitted, is a home builder with over 20 years of experience. As set forth in the Affidavit of Robert Delorenzo (copy submitted with the Response filed October 5, 2006 and attached as Evidence Appendix, Exhibit A) ("Delorenzo Affidavit"), a frame having "studs" includes a top plate, a bottom plate, and a plurality of studs (vertical members). Such "studs" are typically placed either 16 inches or 24 inches apart. Conversely, a "post" is a load-bearing vertical member, typically located at the corner of a wall. Unlike "studs," which are located relatively close to each other, additional "posts" are typically spaced more than two feet apart from a corner post. These definitions comport with other sources that are directed to those skilled in the art of home construction. See, Guertin and Arnold, *Fine Homebuilding*, "Anatomy of a Stud-Framed Wall," at <http://www.taunton.com/finehomebuilding/pages/h00023.asp>, (Evidence Appendix, Exhibit B), *Ask This Old House*, Stud Spacing, <http://www.thisoldhouse.com> (Evidence Appendix, Exhibit C), *Ching, Building Construction Illustrated* (3<sup>rd</sup> Ed.), 2001, page 5.03, (Evidence Appendix, Exhibit D), and, *The BOCA National Building Code*, 1999, (stating that, "Studs in nonloadbearing walls and partitions shall not be spaced more than 48 inches...") (Evidence Appendix, Exhibit E).

It is further noted that, while the claims must be given their broadest reasonable interpretation, such an interpretation must be reasonable, "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827 (Fed. Cir. 2004) (emphasis added). Further, as noted at MPEP §2111, "the rules of the PTO require that application claims must 'conform to the invention as set forth in the remainder of



the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description” (quoting the Federal Circuit’s *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) and 37 CFR 1.75(d)(1)).

Reference to “one skilled in the art” when determining the broadest reasonable interpretation is notable, as general usage dictionaries do not always provide the definition used by skilled persons. That is, as set forth in *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300, 72 USPQ2d 1678 (Fed. Cir. 2004), “where evidence such as expert testimony or technical dictionaries demonstrates that artisans would attach a special meaning to a claim term ... ‘general-usage dictionaries are rendered irrelevant with respect to that term ....’” (citing *Vanderlande Indus. Netherland BV v. Int’l Trade Comm’n*, 366 F.3d 1311 (Fed. Cir 2004)). This holding comports with the holding in *Dow Chemical Co. v. Sumitomo Chemical Co., LTD*, 257 F.3d 1364, 1372 (Fed. Cir 2001), which stated that, “[w]e have previously cautioned against the use of non-scientific dictionaries, ‘lest dictionary definitions be converted into technical terms of art having legal, not linguistic significance.’” (Citing *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478, 45 USPQ2d 1429, 1433 (Fed. Cir. 1998).

Thus, in this application, Appellant has produced expert testimony and technical manuals discussing the difference between a “stud” and a “post.” That is, “posts” are the vertical members disposed at the corners of frames and “studs” are the vertical members disposed between the posts and which are spaced about 16 inches or 24 inches apart. As such, a general dictionary definition, such as a definition found in the Random House College Dictionary, has been “rendered irrelevant with respect to that term.” Further, this distinction is noted in the attached definition of the word “post” from the dictionary Encarta (Evidence Appendix, Exhibit F). That is, Encarta notes a general definition of a “post” as “upright pole: a pole of wood or metal fixed in the ground in an upright position, serving as a support, marker, or place for attaching things.” This definition is generally consistent with the definition provided by the Examiner. However, Encarta further notes that in the field of “construction” the word “post” has a more specific definition, “construction upright frame part: a

vertical piece in a building frame that supports a beam.” The latter definition, *i.e.*, the one relating to construction, just as the present application relates to construction, is consistent with the definition provided by Robert Delorenzo.

*Dattner* ‘022 discloses a “building construction in which a basic unit of twelve elements is fabricated into a rectangular parallelepiped to define a structurally rigid module requiring no additional structural members.” That is, the module is defined by four lower horizontal members, four vertical members, and four upper horizontal members – and no additional structural members. It is noted that each of the four vertical members is located at a corner. That is, no vertical member in a module is disposed generally between two other vertical members. Thus, *Dattner* ‘022 discloses a “cuboid volume” structure similar to the structure in U.S. Patent No. 6,959,515. As noted in the Delorenzo Affidavit, “[b]ecause the vertical members of the chassis are load-bearing members, the vertical members would be identified as “posts” by those skilled in the art. Further, because the patent does not disclose additional vertical supports, whether load-bearing or not, between the corner posts, this patent fails to disclose any “studs” as that word is understood in the art.” It is further noted that, as shown in Figure 2, the modules are “room sized” although no specific dimensions are stated. Therefore, it can reasonably be assumed that the corners, and therefore the vertical members, in each module are more than 16 inches or 24 inches apart. As such, and in view of the definitions provided above, each of the vertical members disclosed in *Dattner* ‘022 is a “post” and not a “stud.”

As stated in MPEP §2131:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.... The identical invention must be shown in as complete detail as is contained in the ... claim.

*Verdigaal Brothers v. Union Oil Company of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Company*, 868 F.2d 1226, 1236, (Fed. Cir. 1989). Given the definition of “multiframe openings” and the recitation of “studs” in Claim 1 and as used in the present application, it is respectfully submitted that upon

reading *Dattner* '022, one skilled in the art would not consider a prefabricated house having "a module frame[] having one or more multiframe openings."

Independent Claim 1 recites a prefabricated house comprising two or more modules, each module having a frame, the module frames having one or more multiframe openings. As the cited art does not disclose a prefabricated house comprising two or more modules, each module having a frame, the module frames having one or more multiframe openings, this reference cannot be used as a reference under 35 U.S.C. § 102(e), and the rejection of Claim 1 should be reversed.

Claims 2, 4, 17, and 18 each depend directly from Claim 1 and rely upon their dependency for patentability.

#### Claims 5-6; Rejected under 35 U.S.C. § 103(a)

Claims 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* '022 in view of *Derman* '924. The deficiencies of *Dattner* '022 are noted above. *Derman* '924 discloses a wardrobe or cabinet. There are at least three problems with the use of *Derman* '924 as prior art: (1) *Derman* '924 is non-analogous art; (2) the rejection is not properly supported; and (3) the *Derman* '924 reference fails to disclose the elements cited by the Examiner.

With regard to the first point, Appellant refers to MPEP §2141.01 which cites *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In *Oetiker*, the Appellant claimed an improvement in a hose clamp which differed from the prior art in the presence of a preassembly "hook" which maintained the preassembly condition of the clamp and disengaged automatically when the clamp was tightened. The Board relied upon a reference which disclosed a hook-and-eye fastener for use in garments, reasoning that all hooking problems are analogous. The court held the reference was not within the field of Appellant's endeavor and was not reasonably pertinent to the particular problem with which the inventor was concerned because it had not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments.

This application relates to prefabricated houses. *Derman* '924 discloses a wardrobe or cabinet. Just as a garment hook is not related to a hose clamp, a wardrobe is not related to a prefabricated house. That is, the Examiner has not

demonstrated why one skilled in the art of building prefabricated houses would turn to a reference disclosing a wardrobe to create an improved modular home. As such, the *Derman* '924 reference is non-analogous art.

With regard to the second point, in *KSR International Co. v. Teleflex Inc.*, \_\_\_ U.S. \_\_\_, \_\_\_, 2007 WL 1237837 (2007), the Supreme Court stated the following with respect to the determination of obviousness under 35 U.S.C. § 103:

[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, *it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does*. This is so because inventions in most, if not all, instances rely on building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

*Id.*, at 14 (emphasis added).

In addition, the Supreme Court further noted that:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, *all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue*. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988 (Fed Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinnings to support the legal conclusion of obviousness”).

*Id.*, at \_\_\_ (emphasis added).

It is further noted that, *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) held that, although some of the cited references, individually, may have some of the claimed inventions’ features, “one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention.” *Id.* at 1075. Instead, to reach the proper conclusion under §103:

the decision maker must step backward in time and into the shoes worn by [a person having ordinary skill in the art] when the invention was unknown and just before it was made. In light of *all* the evidence, the decision maker must then determine whether...the claimed invention as a whole would have been obvious at *that* time to *that* person.

*Id.* at 1073-74.

Appellant believes that the Examiner has not properly supported the rejection under 35 U.S.C. § 103(a) and under *KSR International*. The rationale for combining these references is set forth in a single sentence reading, “[i]t would have been obvious to one of ordinary skill in the art to removably couple the studs to the cross members to allow for a greater degree in variation of size of the room modules as shown by Derman.” November 28, 2007, Office Action at p. 3. First, a single sentence is not an “articulated reasoning with some rational underpinnings” sufficient to establish a *prima facie* case of obviousness. Moreover, the Examiner has merely identified two specific components, a “stud” and cross members, from separate references and stated that these elements could be combined. The Examiner has not presented an “articulated reasoning with some rational underpinnings” addressing why one skilled in the art would, for example, need to add cross members to *Dattner* ‘022 when *Dattner* ‘022 specifically states that no members, other than those disclosed, are required. As such, the Examiner appears to be erroneously using hindsight to pick and choose, among isolated disclosures in the prior art, the elements of the invention as recited in the claims of the present application.

With regard to the third point, the Examiner states that *Derman* ‘924 discloses “cuboid volume with...studs.” November 28, 2007, Office Action at p. 3. *Derman* ‘924 discloses a wardrobe or cabinet. As set forth above, to those skilled in the art a “stud” is a wall frame element typically spaced about 16 inches or 24 inches apart and below a covering. *Derman* ‘924 does not disclose any type of wall frame elements including “studs.”

Accordingly, as the cited references cannot be combined as suggested by the Examiner, and the individual references fail to disclose the elements recited in Claims 5 and 6, the rejection under 35 U.S.C. § 103(a) should be reversed.

Claims 7-11, 13, 16 and 19: Rejected under 35 U.S.C. § 103(a)

Claims 7-11, 13, 16 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dattner* '022 in view of *Prigmore et al.* '514. The deficiencies of *Dattner* '022 are noted above. *Prigmore et al.* '514 discloses a building constructed of pre-made panels that are coupled together by hinges. There are at least two problems with the use of *Dattner* '022 in view of *Prigmore et al.* '514 as combined prior art: (1) the rejection is not properly supported; and (2) *Prigmore et al.* '514 fails to disclose the elements cited by the Examiner.

Each side panel of *Prigmore et al.* '514 is disclosed as being pivotally coupled to the roof structure by a hinge element and coupled to a floor element by a plurality of latches. Such a configuration allows the structure to be moved in a collapsed form. This configuration, however, is decidedly the opposite of the frame assembly disclosed in *Dattner* '022. That is, the *Dattner* '022 module relies upon the strength and rigidity of the elements to give each module the desired shape. Thus, the frame elements must be joined and the corners must "form a rigid corner joint." See, e.g., Col. 2, lines 47-61. Alternately, if the frame members are made from steel, the joints could be welded. See, Col. 3, lines 16-21. It is axiomatic that a hinged joint cannot be a rigid joint as the purpose of the hinge is to allow the joint to collapse. It is also axiomatic that a rigid joint, such as a joint formed by welding, cannot be pivoted to allow for a sidewall to fold up against the roof unit. Accordingly, it is impossible to combine these references as suggested by the Examiner.

Moreover, the Examiner again fails to provide an "articulated reasoning with some rational underpinnings" sufficient to establish a *prima facie* case of obviousness. That is, the Examiner merely provides a one sentence conclusion asserting the reference can be combined, but does not articulate the reasons why or discuss how the combination of the references may be accomplished without destroying purpose of the individual references.

The Examiner further states that *Prigmore et al.* '514 discloses both "passive space" and "fixed space." Appellant disagrees. These phrases are defined phrases in the present application. See generally, page 8, lines 19-31. That is, the specification states:

Fixed space is rigid and does not include foldable panels 18. Fixed space is typically any space that has functionality beyond providing volume. For example, the following would qualify as fixed space: closets, bathrooms, kitchens, storages, laundry rooms or house mechanical space, as well as corridors and stairs. Conversely, passive space is compressible space, *i.e.*, that which may be folded. Typically, the passive space is not laden with fixtures, etc.

*Id.*

The “fixed space” of *Prigmore et al.* ‘514 identified by the Examiner is an empty roof area. That is, *Prigmore et al.* ‘514 does not disclose a “functionality beyond providing volume.” Thus, although not shown as being collapsible in *Prigmore et al.* ‘514, such a space is still a “space ... which may be folded.” Any generally empty space, such as a hollow roof, could be folded; the mere fact that *Prigmore et al.* ‘514 fails to disclose such a collapsible structure does not change that nature of the space. Additionally, the present application states that the “core modules” have both fixed and passive space. A “core module” is an “indoor room” (page 8, line 13) and not an “outdoor structure” (page 8, lines 17-18). A roof, such as the *Prigmore et al.* ‘514 roof, is not an “indoor room” and is an “outdoor structure.”

Claim 7, which depends from Claim 1, recites a prefabricated house comprising two or more modules, each module having a frame, the module frames having one or more multiframe openings and foldable panels. As these references cannot be combined and no individual reference discloses a prefabricated house comprising two or more modules, each module having a frame, the module frames having one or more multiframe openings and foldable panels, the rejection under 35 U.S.C. § 103(a) as to Claim 7 should be reversed.

Claim 8, which depends from Claim 7, further recites that a core module has both fixed and passive space. As these references cannot be combined and no individual reference discloses a core module having both fixed and passive space, the rejection under 35 U.S.C. § 103(a) as to Claim 8 should be reversed.

Claims 9 and 10 each depend from Claim 8 and rely on their dependency for patentability.

Claim 11, which depends from Claim 10, further recites that the multiframe openings are structured to be converted into openings. As these references cannot be

combined and no individual reference discloses that the multiframe openings are structured to be converted into openings, the rejection under 35 U.S.C. § 103(a) as to Claim 11 should be reversed.

Claim 13 depends from Claim 12 and relies upon its dependency for patentability.

Claim 16 depends from Claim 10 and relies upon its dependency for patentability.

Claim 19, which depends from Claim 1, further recites that a core module has both fixed and passive space. As these references cannot be combined and no individual reference discloses a core module having both fixed and passive space, the rejection under 35 U.S.C. § 103(a) as to Claim 19 should be reversed.

Claims 14-15; Rejected under 35 U.S.C. § 103(a)

Claims 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Datner* '022 in view of *Prigmore et al.* '514 as applied to claims 13 and further in view of *Derman* '924. The limitations of each reference are detailed above. Further, the Examiner has again failed to provide an "articulated reasoning with some rational underpinnings" sufficient to establish a *prima facie* case of obviousness. Accordingly, the rejection of Claims 14 and 15 is improper and should be reversed.



**Conclusion**

It is submitted that Claims 1-2, 4-11, and 13-19 are patentable over the prior art. Therefore, it is respectfully requested that the Board reverse the Examiner's rejections of Claims 1-2, 4-11, and 13-19 and remand the application to the Examiner for the issuance of a Notice of Allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Jenkins', with a long, sweeping horizontal line extending to the right.

David C. Jenkins  
Registration No. 42,691  
Eckert Seamans Cherin & Mellott, LLC  
600 Grant Street, 44th Floor  
Pittsburgh, PA 15219  
Attorney for Appellant

(412) 566-1253

## **APPENDIX 1 - CLAIM APPENDIX**

1. (Previously Presented) A prefabricated house comprising:  
two or more modules, each module having a frame, said frame having a plurality of studs;  
said module frames having one or more multiframe openings;  
each said multiframe opening incorporating two studs from said frame plurality of studs and having a plurality of medial cross-members; and  
said two or more modules structured to be joined at one of said one or more multi-frame openings.
2. (Original) The prefabricated house of claim 1 wherein:  
said multi-frame openings are enclosed within a covering over said frame; and  
said multi-frame openings are structured to be converted into openings.
3. (Canceled)
4. (Previously Presented) The prefabricated house of claim 1 wherein each cross-member in said plurality of cross-members is coupled to said studs in a manner sufficient to support any additional components selected from the group including: doors, windows, fireplaces or dormers.
5. (Original) The prefabricated house of claim 4 wherein each cross-member in said plurality of cross-members is removably coupled to said studs.
6. (Original) The prefabricated house of claim 3 wherein each cross-member in said plurality of cross-members is removably coupled to said studs.
7. (Original) The prefabricated house of claim 1 wherein said modules include one or more foldable panels.

8. (Original) The prefabricated house of claim 7 wherein:  
at least one of said two or more modules is a core module having a fixed space portion and a passive space portion;  
said fixed space portion having non-foldable walls;  
said passive space portion having said foldable panels;  
said foldable panels movable from a first, closed position to second open position; and  
wherein said core module has dimensions of less than about 66 feet, by 10 feet, by 12 feet when said foldable panels are in said first position.

9. (Original) The prefabricated house of claim 8 wherein said multi-frame openings are structured to be converted into an opening selected from the group including: doors, windows, fireplaces or dormers.

10. (Original) The prefabricated house of claim 8 wherein said modules may be joined at said multi-frame openings with said modules disposed in more than one configuration relative to each other.

11. (Original) The prefabricated house of claim 10 wherein:  
said multi-frame openings are enclosed within a covering over said frame; and  
said multi-frame openings are structured to be converted into openings.

12. (Canceled)

13. (Original) The prefabricated house of claim 12 wherein each cross-member in said plurality of cross-members is coupled to said studs in a manner sufficient to support any additional components selected from the group including: doors, windows, fireplaces or dormers.

14. (Original) The prefabricated house of claim 13 wherein each cross-member in said plurality of cross-members is removably coupled to said studs.

15. (Original) The prefabricated house of claim 12 wherein each cross-member in said plurality of cross-members is removably coupled to said studs.

16. (Original) The prefabricated house of claim 10 wherein each said module includes substantially finished trim.

17. (Original) The prefabricated house of claim 1 wherein said modules may be joined at said multi-frame openings with said modules disposed in more than one configuration relative to each other.

18. (Original) The prefabricated house of claim 1 wherein each said module includes substantially finished trim.

19. (Original) The prefabricated house of claim 1 wherein:  
at least one of said two or more modules is a core module having a fixed space portion and a passive space portion;  
said passive space portion structured to move from a first, closed position to second open position; and  
wherein said core module has dimensions of less than about 66 feet, by 10 feet, by 12 feet when said passive space portion is in said first position.

## **APPENDIX 2 - EVIDENCE APPENDIX**

Exhibit A – Affidavit of Robert Delorenzo, submitted on October 5, 2006, in response to the Office Action of May 5, 2006.

Exhibit B - Guertin and Arnold, *Fine Homebuilding*, “Anatomy of a Stud-Framed Wall,” at <http://www.taunton.com/finehomebuilding/pages/h00023.asp>, submitted on August 21, 2007, in response to the Office Action of May 24, 2007.

Exhibit C - *Ask This Old House*, Stud Spacing, <http://www.thisoldhouse.com>, submitted on August 21, 2007, in response to the Office Action of May 24, 2007.

Exhibit D - *Ching, Building Construction Illustrated (3<sup>rd</sup> Ed.)*, 2001, page 5.03, submitted on August 21, 2007, in response to the Office Action of May 24, 2007.

Exhibit E - *The BOCA National Building Code*, 1999, (stating that, “Studs in nonloadbearing walls and partitions shall not be spaced more that 48 inches....”), submitted on August 21, 2007, in response to the Office Action of May 24, 2007.

Exhibit F - Definition of “post” submitted on February 18, 2008, in response to the Final Office Action of November 28, 2007.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Jeanette E. Chapman

Group Art Unit: 3635

In re application of:

PAOLO TIRAMANI

Serial No.: 10/653,523

Filed: September 2, 2003

MODULAR PREFABRICATED HOUSE

Attorney Docket No. 286357-00004-1

AFFIDAVIT OF ROBERT DELORENZO

Commissioner for Patents  
MAIL STOP AF  
P.O. BOX 1450  
Alexandria, VA 22313-1450

Dear Sir:

Robert Delorenzo hereby declares and states as follows:

1. I am a builder and a contractor with over 20 years of experience in the field of home construction. I have built, or been involved with the building of over 200 homes and/or other buildings. I have owned and operated my own construction business, Delorenzo Construction Corporation for over 15 years.

2. Those skilled in the art of construction, especially in the construction of frames made from wood, identify vertical members of a frame assembly, typically by one of two names; a "post" or a "stud."

3. In a typical frame assembly, a "post" is a load-bearing vertical member, typically located at corner of a wall. Two posts may support a "beam" which is a horizontal load-bearing member. On walls having an extended length, additional posts may be used. The additional posts are, typically, spaced more than two feet apart from a corner post. Posts typically have a greater cross sectional area than a stud.

4. A "stud" is a reduced load-bearing vertical member. Because a stud is a reduced load-bearing member, a stud must be located, typically, less than two feet apart. Studs are typically made from a plurality of wooden 2"-by-4"s. If the studs have an actual cross-sectional area of 2"x 4", that is a non-dressed 2"-by-4", the studs are normally spaced 24" apart. If the 2"-by-4" have been dressed, that is, surfaced with a planing machine, the 2"-by-4" actually has dimensions closer to 1.5" by 3.5". Dressed studs are typically spaced 16" apart. Studs forming a wall typically include a top plate and a bottom plate. That is, a 2"-by-4" extending over the top of, or underneath, the studs.

5. I have reviewed U.S. Patent No. 6,959,515 disclosing a modular building structure. The patent states that a room module includes a steel chassis defining a "cuboid volume." This means that the chassis has four vertical members, one located in each corner of the module. The patent further states that "cross bracing" by diagonal members is optional. Because the vertical members of the chassis are load-bearing members, the vertical members would be identified as "posts" by those skilled in the art. Further, because the patent does not disclose additional vertical supports, whether load-bearing or not, between the corner posts, this patent fails to disclose any "studs" as that word is understood in the art.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10.3.06

Dated

  
Robert DeIorenzo



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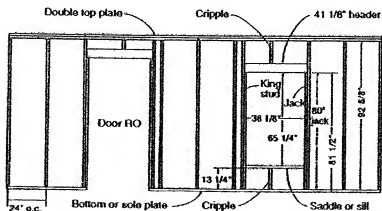
## Anatomy of a Stud-Framed Wall

### Proper framing for bearing and nonbearing walls

by Michael Guertin and Rick Arnold

#### Wall plates

A wall is a collection of studs (usually sized 2x4 or 2x6) equally spaced (usually 16 in. or 24 in. on center) and sandwiched between top and bottom plates. The top plate can be either single or double. Double plating is most common on load-bearing walls unless the roof rafters or trusses and floor joists stack directly over the studs in the wall, then a single top plate can be used.



Load-bearing wall

#### Headers

Large openings in the wall are made for windows and doors. When the opening is greater in width than the stud spacing -- and most windows are wider than 24 in. -- then a header must be inserted to carry the load of the interrupted stud(s). A header is a simple beam sized to support the load above the opening it spans.



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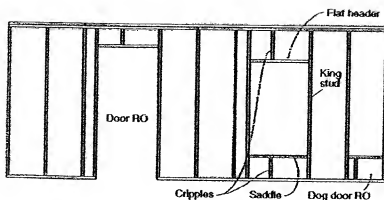
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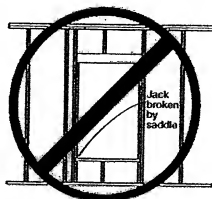
The Taunton Press  
HOUSE PLANS



Nonbearing wall

## Jack studs and king studs

The header is supported by a jack stud at each end. Jacks, sometimes called trimmers, fit under each end of a header, and they transfer the load that the header carries down to the bottom plate and the framing beneath. Nailed to the jacks are full-height studs called king studs; they support the assembly between the plates. Sometimes jacks must be doubled on wide openings so there's enough supporting surface for the header to bear on. Jacks can be replaced with a steel header hanger attached to the king stud.



Avoid this practice.

## Saddles and cripples

A saddle (also called a sill) forms the bottom of a window opening. It's a piece of 2x stock laid flat and nailed between the jacks. Cripples are short pieces of 2x stock that run underneath the saddle. And, depending on a header's height, cripples can run from the header to the plate. Cripples are located at the points where a common stud would have been located had it not been interrupted by the opening.

Mike Guertin and Rick Arnold are professional builders in Rhode Island with 20 years' experience building custom homes. In addition to being contributing editors for *Fine Homebuilding* magazine, they have written numerous articles on homebuilding, and they conduct regular seminars for builders.

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### Stud Spacing

Building interior walls

#### RELATED ARTICLES

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Q: My house was built in 1950, and its exterior walls are made of cement block. When I removed some interior walls while renovating the bedroom, I noticed that the studs were spaced 24 inches on center. When I install new walls, should I keep that spacing? I plan to cover them with drywall.

ASK A QUESTION

BROWSE ALL QUESTIONS

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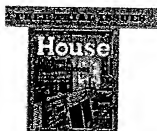
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— Brad, East Peoria, IL

A: Tom Silva replies: Codes generally allow 24-inch on-center spacing for studs in interior nonbearing walls, and under certain circumstances even for load-bearing walls. But I don't see why you'd want to do it, even if you can. You don't save much money in materials or much time in installation, and the finished wall is likely to flex if you lean on it. I build interior walls with 2x4 studs spaced 16 inches on center and cover them with at least 1/2-inch-thick drywall. They're stiffer and more solid-feeling than anything built with 24-inch spacing.



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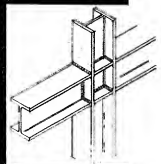
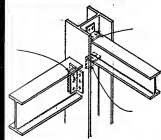
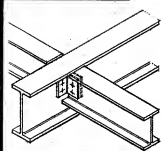
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# BUILDING CONSTRUCTION ILLUSTRATED

FRANCIS D.K. CHING

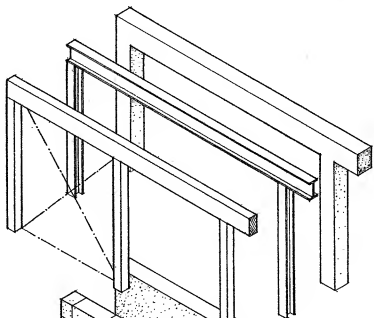


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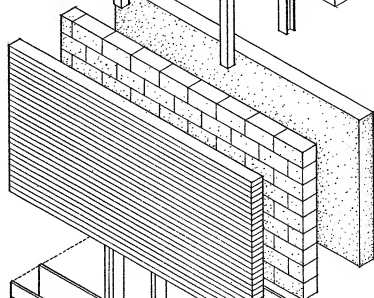
### Structural Frames

- Concrete frames are typically rigid frames and qualify as noncombustible, fire-resistant construction.
- Noncombustible steel frames may utilize moment connections and require fireproofing to qualify as fire-resistant construction.
- Timber frames require diagonal bracing or shear planes for lateral stability and may qualify as heavy timber construction if used with noncombustible, fire-resistant exterior walls and if the members meet the minimum size requirements specified in the building code.
- Steel and concrete frames are able to span greater distances and carry heavier loads than timber structures.
- Structural frames can support and accept a variety of nonbearing or curtain wall systems.
- The detailing of connections is critical for structural and visual reasons when the frame is left exposed.



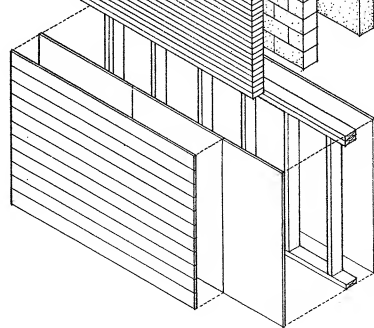
### Concrete and Masonry Bearing Walls

- Concrete and masonry walls qualify as noncombustible construction and rely on their mass for their load-carrying capability.
- While strong in compression, concrete and masonry require reinforcing to handle tensile stresses.
- Height-to-width ratio, provisions for lateral stability, and proper placement of expansion joints are critical factors in wall design and construction.
- Wall surfaces may be left exposed.



### Metal and Wood Stud Walls

- Studs of cold-formed metal or wood are normally spaced @ 16" or 24" (406 or 610) o.c.; this spacing is related to the width and length of common sheathing materials.
- Studs carry vertical loads while sheathing or diagonal bracing stiffens the plane of the wall.
- Cavities in the wall frame can accommodate thermal insulation, vapor retarders, and mechanical distribution and outlets of mechanical and electrical services.
- Stud framing can accept a variety of interior and exterior wall finishes; some finishes require a nail-base sheathing.
- The finish materials determine the fire-resistance rating of the wall assembly.
- Stud wall frames may be assembled on site or panelized off site.
- Stud walls are flexible in form due to the workability of relatively small pieces and the various means of fastening available.



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**2305.5 Nonloadbearing walls:** Studs in nonloadbearing walls and partitions shall not be spaced more than 48 inches (1219 mm) o.c., and are permitted to be erected with the long dimension parallel to the wall, unless otherwise approved as an integrated assembly by testing. A single top plate shall be prohibited except where such plate is installed in accordance with Section 2305.4.2.

**2305.5.1 Notching and boring:** Notches in studs shall not exceed 40 percent of the stud depth. Bored holes shall not exceed 60 percent of the stud depth and shall not be closer than  $\frac{3}{4}$  inches (15 mm) to the edge. Notches and holes shall not occur in the same cross-section.

**2305.6 Support and anchorage:** Support and anchorage of members on girders, walls and beams shall conform to Sections 2305.6.1 through 2305.6.3.

**2305.6.1 Support and anchorage on girders:** All members framing into girders shall be anchored or tied to secure continuity. The ends of all wood beams that rest on girders shall bear not less than 4 inches (102 mm) or shall be supported in approved metal stirrups, hangers or on wood clips or ribbon strips. Beams framing from opposite sides shall either lap at least 6 inches (152 mm) and be bolted or spiked together or, where framed end-to-end, the beams shall be secured together by approved ties, straps, dogs, plates or sheathing.

**2305.6.2 Support and anchorage on walls or beams:** Except where supported on a 1 x 4 ribbon strip and nailed to the adjoining stud, joists shall bear on walls or beams of wood or steel not less than  $\frac{1}{2}$  inches (38 mm) or shall be supported by metal stirrups, hangers or a nominal 2-inch wood ledger strip. The minimum concrete or masonry support shall be 3 inches (76 mm). Joists framing over beams from opposite sides shall either lap at least 3 inches (76 mm) and be securely fastened together or, where framed end-to-end, the joists shall be secured together by approved ties, straps, dogs, plates or sheathing.

**2305.6.3 Girder supports:** Wall plate boxes of the self-releasing type, or approved hangers, shall be provided where beams and girders are supported by concrete or masonry. An air space of  $\frac{1}{2}$  inch (13 mm) shall be provided at the top, end and sides of the member unless approved naturally durable or preservative-treated wood in accordance with Section 2311.0 is installed. Wood beams and girders supported by walls required to have a fire-resistance rating of 2 hours or more shall have not less than 4 inches (102 mm) of solid concrete or solid masonry between their ends and the outside face of the wall and between adjacent beams.

**2305.7 Wind bracing:** Structural members and connections that resist wind pressures shall be designed for the wind loads as required by Section 1609.0.

**2305.7.1 Sheathing:** Bracing sheathing shall be applied with all edges supported.

**2305.7.2 Design:** Members or connections shall be permitted to be designed in accordance with Section 2303.1.3 for wind speeds shown in Figure 1609.3.

**2305.8 Seismic bracing:** Where structural analysis of the seismic force-resisting system is not provided, buildings shall meet

the provisions of this section and shall have roof and exterior wall dead loads less than or equal to 15 psf (718 Pa) and floor dead loads less than or equal to 10 psf (479 Pa).

#### Exceptions

1. Detached one- and two-family dwellings located in seismic map areas having an effective peak velocity-related acceleration ( $A_v$ ) value less than 0.15.
2. The exterior wall weight limitation shall not apply to masonry veneer attached to one-story Seismic Performance Category B buildings.

**2305.8.1 Wall bracing required:** All exterior walls and required interior-braced walls shall be braced by one of the types of sheathing prescribed in Table 2305.8.1 for each 25 lineal feet (7620 mm) of exterior wall or required interior-braced wall line. The required length of sheathing shall be distributed along the length of the braced wall with sheathing placed at each end of the exterior wall or interior-braced wall. A minimum 4-foot (1219 mm) length of sheathing shall be located at the end of each braced wall. The construction of braced walls shall comply with the requirements of Section 2305.9.

**2305.8.2 Double-sheathed walls:** Where braced walls are sheathed on both sides with identical sheathing, the required length of sheathing in Table 2305.8.1 is permitted to be taken as one-half the tabular length. Where different sheathing materials are used on either side of a wall, the required length of sheathing in Table 2305.8.1 is permitted to be taken as one-half of the tabular length for the material requiring the greater length. Double-sheathed walls shall have a minimum length of 4 feet (1219 mm).

**Table 2305.8  
WALL SPACING AND HEIGHT LIMITATIONS  
FOR WOOD FRAME CONSTRUCTION**

| Seismic Performance Category | Maximum distance between interior-braced walls (feet) <sup>c</sup> | Maximum stories (height) permitted <sup>d</sup> |
|------------------------------|--|---|
| A                            | See Section 1610.1, Exception #3                                   |   |
| B                            | 35   | 3 (40 feet)                                     |
| C                            | 25   | 2 (30 feet)                                     |
| D <sup>a</sup>               | 25   | 1 (20 feet) <sup>b</sup>                        |
| E                            | Engineering analysis required, see Section 2306.0                  |   |

**Note a.** Applies only to Seismic Hazard Exposure Group I; engineering analysis required for Seismic Hazard Exposure Group II.


**Note b.** Detached one- and two-family dwellings shall not exceed two stories or 30 feet in height.

**Note c.** 1 foot = 304.8 mm.

**2305.8.3 Stud walls:** Stud walls that are less than the full height of the story shall be braced as required for exterior walls or interior-braced walls and shall be considered an additional story.

**2305.8.4 Sheathing installation:** Sheathing shall be installed in accordance with the provisions of Table 2305.13 where acting as wall bracing. To be considered effective as bracing,



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## Dictionary

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possibility  
 possible  
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 possie  
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 possum  
 possumhaw  
 POST  
 ► **post (1)**  
 post (2)  
 post (3)  
 post (4)  
 post-  
 post-and-rail  
 fence  
 post-audit  
 post-bellum  
 post binding

### post (1)

post [ pōst ]

noun (*plural posts*)

#### Definition:

1. **upright pole:** a pole of wood or metal fixed in the ground in an upright position, serving as a support, marker, or place for attaching things

2. **CONSTRUCTION upright frame part:** a vertical piece in a building frame that supports a beam

3. **HORSE RACING racecourse indicator:** either of two upright poles marking the starting point and finishing line on a racecourse

4. **furniture support:** one of the upright supports of a piece of furniture such as a chair or a four-poster bed

5. **SPORTS ( Informal )**  
Same as goalpost

6. **JEWELLERY earring part:** a metal stem on a pierced earring that passes through the ear and fits into a cap at the back

7. **ONLINE**  
Same as posting<sup>1</sup> (sense 1)

transitive verb (*past and past participle*

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Dictionary

post-ed, *present participle* post-ing, *3rd person present singular* posts)

**Definition:**

1. **display something:** to display something such as an announcement, name, or result in a public place
2. **publish something electronically:** to make text appear online or at an Internet location
3. **U.S. erect signs forbidding something:** to put up signs around a property warning against trespassing or engaging in a forbidden activity
4. **U.S. denounce publicly:** to denounce somebody by displaying damaging information publicly ( *dated* )
5. **LEISURE score points:** to score something, e.g. points, in a game or sport
  - *posted a win in his first game of the season*
6. **give notice of marriage:** to announce a forthcoming marriage in a church
  - *post the banns*
7. **NAUTICAL name ship:** to publish the name of a ship presumed lost or sunk

[Pre-12th century. < Latin *postis* "something that stands in front" < Indo-European, "to stand"]



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**APPENDIX 3 - RELATED PROCEEDINGS APPENDIX**

None.